Compendium of Useful Practices

Table of Contents

I. Introduction

This compendium contains case studies of useful practices. Useful practices are those processes, techniques, or innovative uses of resources that have either demonstrated actual improvements or have the potential to improve the cost, schedule, quality, performance, or some other factor that impacts National Environmental Policy Act (NEPA) implementation. It is intended to be a living document that will be periodically updated to reflect the needs of NEPA practitioners as well as the current state of NEPA law and policy. CEQ will periodically convene meetings of NEPA Task Force members and initiate data calls for useful practices that will be reviewed and added to the compendium.

The NEPA Task Force

In 1997, the Council on Environmental Quality published a report entitled, "*The National Environmental Policy Act – A Study of its Effectiveness after Twenty-five Years.*" This report examined NEPA's effectiveness and prospects for improving the environmental analysis and documentation process outlined in the National Environmental Policy Act and the CEQ Regulations Implementing the Procedural Provisions of the National Environmental Policy Act (40 C.F.R. parts 1500-1508). The 1997 Report highlighted twelve cases as examples to demonstrate where agencies were exploring new frontiers for improving on the NEPA process. These case studies served to alert agencies to successful practices that may have application in other situations and are available at http://ceq.eh.doe.gov/nepa/nepa25fn.pdf.

In 2002, CEQ established the National Environmental Policy Act Task Force in an ongoing effort to improve and modernize NEPA analyses and documentation and to foster improved coordination among all levels of government and the public. The NEPA Task Force reviewed current Federal agencies' planning and decision-making processes to determine ways that agencies can obtain higher levels of efficiency, clarity, and ease of management through the improved use of existing authorities; better information management; improved interagency and intergovernmental collaboration; and the use of new technologies. Charged with proposing specific actions to make the NEPA process more effective, efficient, and timely, the Task Force focused on several areas of NEPA implementation and prepared its report, *NEPA Task Force Report to the Council on Environmental Quality: Modernizing NEPA Implementation* (*Modernizing NEPA Implementation*) that made recommendations to CEQ on actions CEQ should take to improve NEPA implementation. The report is available at http://ceq.eh.doe.gov/ntf/report/index.html.

In addition to the report, the Task Force was asked to develop a compendium of case studies or examples of agency efforts to improve the NEPA process. The examples and case studies in this compendium are not formally endorsed nor are they guaranteed to ensure success or improvement – what works for one agency or

one project may not work for all. These examples and case studies were compiled to share examples and ideas for modernizing NEPA practices – making the process more effective, efficient and timely.

This compendium does not establish new requirements for NEPA analyses and is not, and should not be viewed as, formal CEQ guidance.

Selecting Useful Practices

A suit of "case studies" was collected through the process of personal interviews with Federal agencies, conference calls with NEPA field practitioners, and submissions from the public. The term "best practice" was originally used to characterize practices that the task force could use for broad dissemination that demonstrate efficient and effective practices useful in modernizing NEPA analysis and documentation.

After reviewing the case studies and discussing them with agencies and other participants in NEPA processes, the task force decided that the term "best practices" is misleading because it implies a level of use beyond that currently realized, as well as some type of peer review or expert's endorsement. The term "useful practices" is used because it more accurately describes the case studies. A useful practice is essentially a process, technique, or innovative use of resources that has either improved or demonstrated the potential to improve the way an agency conducts its NEPA process by realizing cost savings, producing more timely analyses and documents, improving the quality of analysis, effectively engaging interested parties, or otherwise made the NEPA process more effective, efficient or timely.

II. Report Organization

This compendium of useful practices provides a list and description of useful practices for the NEPA practitioner and participant. Each example and case study is presented and discussed with key features highlighted to help the reader determine its usefulness and potential applications.

Adaptive Management/Monitoring

(see: http://ceq.eh.doe.gov/ntf/report/chapter4.pdf)

Case Studies:

These case studies demonstrate how adaptive management and post-implementation monitoring programs developed during the NEPA process can help ensure that the predicted effects are consistent with what actually happens on the ground after implementation and provide for adapting to changes in conditions and circumstances and adjusting to unforeseen consequences or results.

- Post-implementation monitoring case study:

  Flower Garden Banks – Gulf of Mexico: Long-term monitoring

- *Future case studies will be added*

Collaboration – Federal and Intergovernmental

(see: http://ceq.eh.doe.gov/ntf/report/chapter2.pdf)

Case Studies:

These case studies focus on practices that have proven successful in building collaboration among agencies and with the public in the implementation of agency programs and projects.

- Intergovernmental Collaboration:

  Las Cienegas National Conservation Area: Consensus Based Management

- *Future case studies will be added*

Examples:

- Memoranda of Understanding (MOU) and Agreements: MOU and other agreements are provided as useful examples that have provisions for agencies to consider using when drafting new agreements.

- *Future case studies will be added*

Environmental Management Systems

(see section 4.6 at http://ceq.eh.doe.gov/ntf/report/chapter4.pdf)

Case Studies:

These case studies show how Environmental Management Systems can be effectively used to incorporate monitoring and adaptive management into environmental analyses and used in conjunction with NEPA.

- Tennessee Valley Authority Environmental Management System

- *Future case studies will be added*

Programmatic Analysis and Tiering

(see: http://ceq.eh.doe.gov/ntf/report/chapter3.pdf)

Case Studies:

These case studies are provided as examples of the various uses of programmatic reviews or assessments that do not result in decisions and are available for use in subsequent NEPA analyses, as well as programmatic NEPA analysis and documentation.

- Programmatic Assessment:

  i. Ozark-Ouachita Highlands Assessment

- Programmatic NEPA Analyses and Documents:

  i. Shoreline Management Initiative

- *Future case studies will be added*

Technology

(see: http://ceq.eh.doe.gov/ntf/report/chapter1.pdf)

Case Studies:

These case studies demonstrate the innovative use of information technology to enhance the efficiency and effectiveness of the NEPA process. These case studies include examples of new technologies and new applications of existing technologies that improve the assessment and communication of potential environmental impacts.

- *US Visitor and Immigrant Status Indicator Technology (US-VISIT) Program Geographic Information System*
- *Future case studies will be added*

III. Case Studies and Examples:

Adaptive Management & Monitoring

This case study demonstrates how post-implementation monitoring programs developed during the NEPA process can help ensure that the predicted effects are consistent with what actually happens on the ground after implementation and provide for adaptive management to address changes in conditions and unforeseen consequences or results.

Project: Flower Garden Banks, Gulf of Mexico

Practice: Long-Term Monitoring and Adaptive Environmental Management

Agency: Minerals Management Service (MMS)

Involved Parties: MMS, Gulf Reef Environmental Action Team (GREAT), Oil and Gas Industry, NOAA

Point of Contact: Rodney Cluck (703) 787-1087, rodney.cluck@mms.gov

Dates: ***Began*****:** 1973 ***Ended:*** Ongoing

Project Description: MMS is responsible for leasing federal lands of the outer Continental Shelf (OCS) for oil and gas exploration and development. In the early 1970s, the oil and gas industry became interested in exploring operations in the deep water of the Gulf of Mexico. Early Environmental Impact Statements (EIS) documented the existence of thriving coral reef communities on two unique banks, the East and West Flower Garden Banks. Because of the potential sensitivity of the coral reefs to production, MMS sponsored public meetings beginning in 1973 that resulted in mutually accepted concepts to protect reef communities.

Based on the public meetings, MMS introduced an implementation method called a "stipulation" that specified upfront protective measures for the reef and reflected the initial uncertainty surrounding production in the vicinity of the Flower Banks. The stipulation was made part of each lease and was binding. The stipulation established a no activity zone (NAZ) and a four mile shunt zone around the reefs. The NAZ zone, where no production can take place, directly protects the reef from damage due to drilling, platform and pipeline placement, and anchors. The shunt zone, in which all effluent from the drilling process must be shunted to near the sea floor, was designed to prevent the drilling discharge from reaching the bank's reefs and biota.

As part of the lease stipulation, oil and gas developers had to monitor the environmental conditions at production sites and at the banks themselves in accordance with MMS guidelines. The initially prescriptive approach was subject to adaptive environmental monitoring. As more was learned about the banks through

the environmental studies program and lessee monitoring, the original stipulation was modified – and continues to be modified – to reflect the best possible information. This data is used to modify the stipulation in active leases.
For example, after several years of monitoring by MMS and the lessees, MMS determined that shunting was working. No damage was being done to the banks or adjacent biota. As a result, MMS reduced the stipulation for monitoring at production sites. However, monitoring also indicated that tourist boats visiting the reefs were causing damage by placement of their anchors. The monitoring data enabled MMS to work with the Gulf Reef Environmental Action Team (GREAT) to develop a solution for preventing anchor damage while not discouraging tourism.

In 1992, the Flower Garden Banks were designated as a National Marine Sanctuary under NOAA protection. MMS and NOAA continue to monitor the health of the ecosystem. The sanctuary manager from NOAA is also involved in all proposed oil and gas related activities near the Flower Gardens.

Value as a Practice:

Results: This practice of long term monitoring has resulted in the protection of the Flower Garden Banks, with their eventual designation as a National Marine Sanctuary, while still allowing for oil and gas exploration and tourism. It has enabled MMS to develop creative solutions based on real data that resulted in environmental protection while meeting the needs of other stakeholders such as the oil and gas industry and tourists.

In addition, adaptive management of the Flower Banks resulted in a significant reduction in operation costs. As new information was gathered and analyzed in the monitoring process, the number of cruises and dives was significantly reduced and therefore lessened the annual cost of the program. Stepwise reduction in cost and associated activities, based on adaptive management principles, ensured that MMS received the same quality information needed to monitor the health of the banks.

Challenges Overcome: Implementation of an adaptive management approach overcame the challenges of resource management in successfully balancing the needs of oil and gas production and tourism with environmental protection. This approach also achieved results when there was little data as to the potential impacts of oil and gas exploration on the reefs. Monitoring led to the discovery that it was not the oil and gas exploration, but rather the tourist boats that were having certain adverse impacts on the reefs. This practice demonstrates successful approval of an action in a NEPA document where the data was incomplete and the outcome was therefore uncertain. Successful project implementation and environmental protection was achieved through the establishment of monitoring and subsequent corrective actions.

Challenges remaining: Funding for ongoing monitoring is a challenge. A steady funding source is necessary to continue the monitoring, but obtaining the necessary

funding is often difficult as managers may find it hard to understand the need for the continuous funding source for monitoring after the project itself has been implemented.

Collaboration – Federal and Intergovernmental

This case study focuses on practices that have proven successful in building collaboration among federal agencies and with the public in managing public lands.

Project: Las Cienegas National Area

Practice: Consensus-based Management

Agency: Bureau of Land Management

Involved Parties: Local communities including Sonoita, Elgin, Patagonia, Huachuca City, Sierra Vista, Nogales, Tucson and Phoenix; the Forest Service; National Resources Conservation Service; US Fish and Wildlife Service; US Geological Survey; Arizona Game and Fish; Arizona State Land Department; Pima County Parks and Recreation; Santa Cruz County; and numerous user groups and private citizens.

Point of Contact: Karen Simms, (520) 258-7200, Karen_simms@blm.gov

Dates: ***Began***: 1995. ***Ended:*** Collaboration is ongoing.

Project Description: In the early 1990s, BLM began a traditional planning process following its acquisition of public lands in what was then called the Empire-Cienega Resource Conservation Area. The process failed due to the limited public participation opportunities and increasing public polarization and divisiveness over issues. Recognizing the need for increased stakeholder involvement, BLM reinitiated the process in 1995. Instead of relying on traditional planning methods, BLM initiated a consensus based, collaborative management approach.
The objective of this project was to create a land use plan for a 170,558 acre area that included 49,000 acres of public lands. BLM successfully overcame historical culture clashes and resource conflicts through partnership with citizens, local governments and conservation and user groups concerned about the health of the Cienegas Creek Watershed. The collaboration resulted in the creation of the Sonoita Valley Planning Partnership and the successful establishment of the Las Cienegas National Conservation Area.

Value as a Practice:

Results: Achieved community oriented resolutions to local and national issues affecting public land resources. Achieved consensus and stakeholder buy-in on potentially controversial land use issues such as recreation opportunities, conservation areas, endangered species management and livestock grazing.

Challenges Overcome: Previously unsuccessful attempts to initiate land use plans for this area were overcome by increasing stakeholder involvement in all aspects of planning through consensus based management and an open participatory process. Conflicts resulting from rapid urban growth and increased demands on land resources were overcome through partnership and collaboration.

Challenges Remaining: Continuing the successful implementation of the goals and management prescriptions articulated in the land use plans.

Collaboration – Federal and Intergovernmental

These examples of Memoranda of Understanding (MOU) and other agreements that represent different approaches to structuring the relationships and collaboration among federal agencies and other stakeholders including tribes and local governments are provided as useful examples that have provisions for agencies to consider using when drafting new agreements.

1. Memorandum of Understanding Between Beaverhead County, Montana And The United States Department of Agriculture Beaverhead-Deerlodge National Forest

2 Memorandum of Understanding Between The U.S. Department of the Interior Bureau of Indian Affairs, U.S. Department of the Interior Bureau of Land Management, Shoshone and Arapahoe Tribes Joint Business Council and Fremont County, WY Board of Fremont County Commissioners: Concerning Agency and Tribal Cooperation on the Wind River Gas Development Environmental Impact Statement

3. Memorandum of Understanding Between United States Department of Agriculture, Forest Service, Bighorn National Forest, and The State Of Wyoming

4. Memorandum of Understanding Between Bureau of Land Management (Lewistown Field Office) and Blaine, Chouteau, Fergus and Phillips Counties, Montana [Upper Missouri River Breaks National Monument]

5. Memorandum of Understanding Between The Bureau of Land Management, New Mexico State Office And Catron County Commission, New Mexico: Regarding the Environmental Impact Statement for the Socorro Resource Management Plan Revision

6 Cooperating Agency Agreement Between The Federal Aviation Administration and The Hualapai Indian Tribe

7. Memorandum of Understanding Between Fremont County By and Through The Fremont County Board of County Commissioners and The United States Department of the Interior Bureau of Land Management by and Through The

Wyoming BLM State Director: Regarding Development Of The Environmental Impact Statement(s) For The Jack Morrow Hills Coordinated Activity Plan

8. Memorandum of Understanding Between Madison County and Dillon Field Office, Bureau of Land Management United States Department of the Interior [Madison County Lands]

9. General Agreement Between National Park Service, Curecanti National Recreation Area and US Bureau of Reclamation, Upper Colorado Region: Relating to the Resource Protection Study and Associated Environmental Impact Statement for the Curecanti National Recreation Area

10. Memorandum of Understanding Among The National Park Service State Of Montana, U.S. Forest Service, and the Animal And Plant Health Inspection Service

11. Memorandum of Understanding Between USDA Forest Service, Medicine Bow-Routt National Forests, and Seven Conservation Districts that Border the Medicine Bow National Forest

12. Memorandum of Understanding Between The State of Wyoming By and Through The Director of the Wyoming Office of Federal Land Policy and the Board of Commissioners, Big Horn County, Board of Commissioners, Johnson County, Board of Commissioners, Sheridan County, Board of Commissioners, Washakie County, Lake DeSmet Conservation District, Powder River Conservation District, Sheridan County Conservation District, Shoshone Conservation District, South Big Horn Conservation District, and Washakie County Conservation District

13 Memorandum of Agreement between Utah Bureau of Land Management Vernal Field Office and the Ute Indian Tribe Business Committee: Cooperating Agency Agreement

14 Memorandum of Understanding between Cher-Ae Heights Indian Community of the Trinidad Rancheria and Bureau of Land Management, United States Department of the Interior regarding California Coastal National Monument Resource Management Plan

15 Memorandum of Understanding between the USDA Forest Service, Idaho Panhandle, Kootanai, and Lolo National Forests and the Idaho Governor's Office of Species Conservation

Environmental Management Systems

This case study shows how Environmental Management Systems can be effectively used to incorporate monitoring and adaptive management into environmental analyses and used in conjunction with NEPA.

PRACTICE: Development and implementation of an agency-wide EMS, including the NEPA process with direct linkages to other EMS processes.

AGENCY: Tennessee Valley Authority (TVA)

INVOLVED PARTIES: Internal TVA organizations

POINT OF CONTACT: Jon M. Loney (865) 632-3012, jmloney@tva.gov.

DATES: ***Began:*** January 2001 ***Ended*****:** Development completed and ongoing implementation since April 2002.

Project Description: In 2002, TVA completed a revision of its Environmental Management System (EMS). The new EMS meets Executive Order 13148 requirements for federal agencies to develop environmental management systems. The EMS incorporates the NEPA process as an integral component of the system with direct linkages to other EMS processes.

The NEPA process was strengthened by its integration into the revised comprehensive EMS. A new Environmental Policy and Principles was adopted which re-established TVA's commitments to environmental protection and stewardship, to assess and minimize the effects of TVA operations on the environment, and to involve the public. An Achievement Plan was developed to assure TVA meets its corporate environmental commitment and recognized the EMS as the principal tool for doing so. Corporate environmental objectives and targets were established and new methods to measure TVA's overall environmental performance were introduced.

Significantly, the NEPA Process was directly linked to other EMS Processes, including those for environmental training, communication and stakeholder involvement, records management, environmental auditing, corrective and preventive action, performance monitoring and reporting, and management review. In turn, a system of business unit and facility-level processes and procedures tier from the agency-level EMS to assure consistent implementation at TVA plants and field locations. These systematic linkages work together to reinforce all aspects of NEPA performance, and provide improved environmental compliance, cost savings in environmental management programs, and measurable improvements in achieving TVA environmental objectives.

Internet Site: (Internal TVA Web).

Value as a Practice:

Results:

The EMS invokes the monitoring component of the adaptive management model through a formal system of mitigation identification and tracking, systematic environmental performance measurement, and auditing and corrective action programs for NEPA compliance. Before the issuance of a decision document, TVA requires that the mitigation commitments are entered into the electronic system with due dates and assignments of the individuals responsible for implementation. The system enables TVA to effectively track commitments for mitigation made in NEPA documents. Performance is measured by a NEPA Process Effectiveness Index calculated from survey results taken for each completed review. A broader TVA Environmental Impact Index provides a composite measure of TVA project impacts, both beneficial and detrimental, on air quality, water quality, land, waste production, and energy consumption. The audit function includes all elements of EMS conformance in the same fashion as regulatory compliance. Thus, audits of TVA facilities and programs address NEPA and any NEPA findings, and track status and closure of each finding. This system provides for a greater sense of accountability among management and staff.

Related EMS processes linked to NEPA also provide for appropriate NEPA training across TVA, consistent public messages and approaches to public involvement, and systematized records management for all NEPA administrative records. Managing the NEPA process within an overall EMS framework better enables TVA to effectively and efficiently meet its energy, economic development and environmental objectives. The full integration of NEPA into an agency-wide EMS helps meet the national environmental policies set forth in Section 101 of NEPA.

Challenges overcome: The development and implementation of an integrated NEPA/EMS approach was a challenge because of the diversity and scope of TVA programs and facilities. As an agency with broad natural resources and economic development programs as well as operational responsibilities for its system of dams, electric power plants, and transmission, TVA must deal with widely varying NEPA actions and a complex array of environmental regulations. Designing an agency-wide system that balances consistent implementation with the particular needs of organizations and facilities is difficult. This was achieved through design of the NEPA process revisions and all EMS processes through work teams with representatives from across TVA, with guidance and review by senior environmental managers from the major TVA organizations.

TVA is still in the early stages of implementing its new EMS and NEPA process improvements. However, performance indicator data for the first two years points to

substantial progress in environmental performance and the Environmental Impact Index.

Challenges remaining: A major challenge is to meet increasing project schedule demands, with competing priorities and, at best, static technical resources. TVA is exploring an initiative for establishing an improved structure for establishing NEPA project priorities that will help address this issue.

Programmatic Analysis and Tiering

This case study is provided as an example of a programmatic assessment that does not result in any decisions and is used in subsequent NEPA analyses and documents.

Project: Ozark-Ouachita Highlands Assessment

Practice: A broad assessment of baseline resource and environmental conditions of a large landscape. These assessments provide context for determining what changes in land use plans need to be considered, focusing NEPA purpose and need statements for forest plan analyses, and arraying information for cumulative effects analyses.

Agency: Forest Service

Point of Contact: Bill Pell (501) 321-5320, bpell@fs.fed.us

Dates: ***Began:*** 1997 ***Ended****:* 1999

Project Description: The Forest Service initiated the assessment and worked with other agencies to develop a synthesis of the best information available on conditions and trends in the Ozark-Ouachita Highlands, 6.5 million acres of public land and waters. These conditions and trends will have a bearing on the future management of the Region's national forests. The assessment report does not make decisions, but provides information for planning. The assessment serves as the basis for defining planning questions and structuring the purpose and need for changes in management on forest plans. It also serves as a basis for focusing the NEPA process at the forest plan level.

The assessment addresses the condition of lands and waters for over 6.5 million acres of Federal land. It addresses the terrestrial, aquatic, atmospheric and socio-economic aspects of the assessment area. This assessment contributes to the revision of 3 National Forest long-term management plans.

Internet Site: Welcome to the Ozark / Ouachita Highlands Assessment Page *available at* http://www.fs.fed.us/oonf/ooha/welcome.htm

Value as a Practice:

Results*:* This project demonstrates the concept of assessing the current conditions and contrasting those with desired conditions before development of a purpose and need for action or initiating the NEPA process. These assessments serve as excellent benchmarks for environmental analysis and cumulative effects assessments for program or forest plan level NEPA analyses.

Challenges overcome: Maintaining a focus on the pertinent management questions to be addressed and the data and information necessary to address these questions; maintaining databases that were easily accessed and available in standard formats; limiting the assessment to summaries of existing and desired conditions without proposing actions for change.

Challenges remaining: Keeping the plan and analysis dynamic and current. Maintaining cooperation and coordination among interest groups for amending forest plans in the Region.

Source of information/references: *"Ozark-Ouachita Highlands Assessment – 5 volume report, 1999*

Programmatic Analysis and Tiering

This case study is provided as an example of programmatic and subsequent tiered NEPA analyses and documents.

Project: Shoreline Management Initiative (SMI)

Agency: Tennessee Valley Authority (TVA)

Point of Contact: Harold Draper, (865) 632-6889, hmdraper@tva.gov

Dates: ***Began*:** 1994 ***Ended:*** Ongoing

Project Description: In 1994, TVA began an initiative aimed at determining a new policy for residential shoreline permitting on its system of dams and reservoirs in seven states – the Shoreline Management Initiative (SMI). The project responded to increasing numbers of applications for residential shoreline alterations such as docks, boathouses, and retaining walls. TVA analysis showed that half of the shoreline could be developed within the next 25 years if current trends continued. TVA decided to conduct a programmatic EIS on the SMI policy seeking to better protect shoreline and aquatic resources while allowing residents reasonable water access.

As alternative development proceeded, it became obvious that the development of permitting standards could not be easily separated from decisions on where and when to allow residential shoreline alterations for new subdivisions. In the Record of Decision (ROD), TVA decided to continue to allow docks and other alterations along shorelines now available for residential access and to establish uniform standards for the alterations. For those reaches of the shoreline where residential access rights did not exist, TVA established a policy to ensure that no more than 38 percent of the shoreline would be developed for residential access. A no net loss evaluation procedure was established that linked the shoreline management policy to an ongoing reservoir land planning process. When public shore land is proposed to be made available for residential use, the no net loss evaluation procedure is initiated. For a given proposal, TVA seeks to "compare the ecological, recreational, and other amenities of the properties involved in the proposal with the public and resource values of the TVA land over which the access rights are requested."

In the reservoir land planning process, TVA land on reservoirs is allocated to planning zones. Projects on the reservoirs are reviewed for consistency with the planning zone, using site specific environmental reviews. Lands that are allocated to natural resource management uses are further planned for specific forest, wildlife, and public use management practices. The reservoir land allocation process is then further tiered to natural resource management plans which determine specific forest, wildlife, and public use management.

Value as a Practice:

Results: The programmatic level review established direction for the program and provided a high level analysis which facilitates preparation of tiered site specific documents. The overall policy and environmental considerations are now linked to site specific decisions and analyses providing a better picture of the potential cumulative impacts and health of the shoreline and associated aquatic resources. This process promotes efficiency because a common set of regulations and policies are established first, and subsequent proposals are reviewed for consistency with these standards before undergoing further environmental review.

Challenges Overcome: TVA overcame initial reluctance to conduct programmatic reviews. The reluctance was due to the perception of excessive costs and uncertain benefits. TVA successfully demonstrated the long term benefits of such an approach and the improvements to agency decision frameworks.

Challenges Remaining: Due to budget considerations, the planning has not been completed for all of the reservoirs. However, the shoreline permitting standards are still in effect for the other reservoirs as is the no net loss evaluation procedure.

Technology

This case study provides an example of how the application of Geographic Information Systems (GIS) can improve the assessment and communication of potential environmental impacts.

Project: US Visitor and Immigrant Status Indicator Technology (US-VISIT) Program Geographic Information System

Agency: US-VISIT Program Management Office

Involved Parties: Customs and Border Protection, General Services Administration, Fish and Wildlife Service

Point of Contact: Beth Baden, (202) 298-5242, beth.baden@dhs.gov

Dates: ***Began:*** 2001 ***Ended:*** Ongoing

Project Description: The former Immigration and Naturalization Service (INS) was charged with the mission of implementing a new entry and exit system to record the arrival and departure of non-US citizens along the nation's borders. In 2003, this legacy INS program was transferred to the Department of Homeland Security and established under the current US-VISIT Program Management Office. In order to plan for a program that had the potential to impact all of the nation's ports of entry, the team established a comprehensive geographic information system that includes aerial photography of all of the land ports and environmental baseline data on numerous resource areas including wetlands, air quality, endangered species, and socioeconomics. This system was planned and initiated when program requirements were uncertain and the potential impacts were unknown. The primary value of the system for NEPA purposes is its ability to provide environmental baseline data that can be assessed for potential impacts under an unlimited number of alternative scenarios. Its utility as a planning tool continues to grow as mission and program requirements are further defined. The use of a database system allows the entire system to be dynamic and evolve along with the project. The GIS system is also important for NEPA purposes because it is an interactive tool that allows the decision-maker and interested stakeholders to see actual representations of potential impacts and alternatives.

Value as a Practice:

Results: Provides a comprehensive planning tool with the capability to develop alternatives and manage design and program concepts in a way that avoids or mitigates environmental impacts. The GIS facilitates outreach because it allows information sharing through visual presentations that

improve communication of concepts and ideas. It also allows for the analysis of potential environmental impacts on an ecosystem wide basis and therefore can improve the assessment of potential cumulative impacts.

Challenges Overcome: Funding constraints, aggressive time frames, compilation of data from diverse sources into a common format, diverse interagency requirements and coordination, and technical solutions for data deployment were challenges that were successfully overcome to implement this requirement.

Challenges Remaining: The US-VISIT Program must develop mechanisms to allow for maximum information sharing while ensuring the integrity and protection of potentially sensitive data. Information security is particularly important to US-VISIT because it is a national security program. Maintaining a commitment to public outreach and open dialogue while ensuring the protection of sensitive data will remain an ongoing challenge. In addition, maintaining the currency and accuracy of data as on the ground conditions change over time will be a challenge.